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The need for conservation management in European 19th century urban housing

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ABSTRACT: This paper explores the merits of pro-active management of common repairs in 19th century urban housing across Europe using Edinburgh as a model due to the historic variety of its approaches and its uniform urban heritage. Such repairs affect the exposed decorative elements, the envelope and occasionally the structure, often exacerbated by inappropriate repairs that can cause fatalities and climate change. Further European approaches to repairs are discussed like Glasgow (payment of maintenance factor), Venice (contribution to local Heritage Trust), Monumentenwacht in Flanders (agency that identifies repairs for its owner members), Hermoupolis (HERMES project evaluates vulnerability within a decision-making model), together with tax incentives (France) and less successful attempts to management (Building Book in Rome). The holistic approach in Edinburgh highlights at the same time the immense volume of work required, hampered by the fragmentation of ownership and the small size of the repair industry, contrasted however by the less widespread repairs in the other European models. The survey shows that increased participation of owners and incentives for their initiative, backed with experienced advice is seen as a more sustainable way forward.

1 INTRODUCTION

Active management of common repairs in 19th century urban housing across Europe should become a priority nowadays even if it concerns ordinary (minor) heritage. The need for such repairs is extensive either for decorative elements and the envelope (blocked gutters retaining water and eroding parapets, balustrades and cornices; delaminating stone at windows mullions, eroding stone chimneys, degradation of ashlar stone or plasterwork) or the structure (tying of internal brick or timber stud walls to the external load-bearing walls, settlement) (SCOSS 2006). Climate change and inappropriate repairs have exacerbated these problems, often with fatal consequences.

The experience in Edinburgh is reviewed here as a benchmark because the variety and quality of approaches practised for the last 50 years is comprehensive and is applied on a quite uniform urban heritage (the C18 and C19 Georgian period). Such repairs in Edinburgh have been managed by either the City Council (through the system of statutory notices) or the Edinburgh World Heritage Trust (previously the New Town Conservation Committee and Old Town Renewal Trust), an independent agency that supports owners with funding, exemplary cases and know-how. In both, practice has been technically successful, despite the fragmentation of owner-

ship and the small size of the repairs industry. However, the immense volume of works statutorily notified by the Council became impossible to control, so currently a new model is sought.

It is useful to reviews similar systems across Europe to exchange good practice and feed to the discussion for alternatives in Edinburgh (around the merits of centralised recording, control and funding): they reveal that their management is much lighter and focuses in encouraging owners with incentives. In neighbouring Glasgow for example, due to a different social organisation, owners in tenements pay a maintenance factor so the local Heritage Trust supports property managers, with possibly a more effective quality control. In Venice, the mixture of historic public and private housing is threatened by continuous abandonment so various Special Acts have funded maintenance and refurbishment of private housing, mostly spent in ground floors repairs. In Flanders a regional agency was set up in charge of surveying problems and ultimately owners will be encouraged, not forced, to carry out repairs. France and Italy on the other hand prefer to offer tax benefits to restoration works, and with a limited scope.

Where no such systems exist yet, a first step is recording the current state of private properties, like the HERMES project in Hermoupolis, with the aim to “evaluate the vulnerability of historic buildings and propose a decision-making model ranking the

need of intervention in a historical building stock.” Rome has had a typological approach to urban rehabilitation by the publication of a “Manuale di recupero”, an effort that integrated research. The broader range of the problems will be summarised before the more detailed examination of practice in each of these areas.

2 COMMON PROBLEMS

The fabric of the 18-19th century housing heritage across cities like Edinburgh, Glasgow, Rome, Paris, Madrid etc is characterised by rubble walls of various matrices (plastered or clad in ashlar), arrangements for their openings and exposed decorative elements (cornices, chimneys, balustrade parapets). Typological analysis around some of these features has some merits in management terms (Giovanetti 1998) and very illustrative manuals have been produced for Edinburgh (Davey et al 1995) and Rome (Manuale 1989) by surveying such features to define dominant and subordinate types, promoting integration with research and analysis. The concept of change should also be considered (Historic Scotland 2011) and therefore such typologies should be determined by the transformation processes they have gone through.

Fabric problems (CIRIA 1994, SCOSS 2006) are usually found at:

- Tying between floors and walls, and lateral confinement of gable end walls
- Poor bonding of ashlar to rubble backing or within brickwork
- Low binder strength in very mixed rubble
- Settlement and shallow foundations
- Delaminating stone at window surrounds or bay-window mullions
- Cracked lintels, distorted openings
- Eroded and unstable parapets, balustrades, chimneys, cornices
- Water and thermal tightness of roofs

1919 is a conventional date, especially in Britain, which defines traditional vs modern building stock, a date that highlights the move from the traditional craftsmanship processes to professional contractors. The historical building stock particularly in Scotland is about 460,000 dwellings among a total of 2.4M (Scottish Government 2012), of which 40% are tenements (blocks of flats of 4 or even 8 stories), a type and age group that has the highest levels of urgent repair. In general, 77% of pre-1919 dwellings have some disrepair in their critical external elements (TBHC 2015). Gradual decay is further exacerbated by poor maintenance and adverse environmental conditions due to climate change (sharper contrast in temperatures between summer and winter, heavier rainfall and snowfall).

Various approaches to the management of repairs of such problems will be reviewed in the following section, showing the common problems throughout Europe to be Multiple Ownership (which affects the initiation of works and coordination) and funding (access to and management of public funds or tax reliefs available to support the finances of private owners). Costs can be exceptionally high for the owner of each flat, so in some cases an agency was created to coordinate and promote preventive conservation to catch problems at an early stage. Edinburgh has experienced a comprehensive range of problems but also technical and administrative solutions, which will be assessed firstly as a platform for the discussion of a selection of cities elsewhere.

3 CASE STUDIES

The administration of common repairs, which is the best way of dealing with such problems has many aspects. A register and designation of status is usually the first step, together with the legal definition of the community of private owners (condominium) and how they deal with repairs (ad hoc or through a maintenance factor). Various combinations of funding through repayable grants or tax reliefs have been practised, which has always been conditioned by the volume of the works and ability to control their quality. Preventive approaches are encouraged by means of manuals and publications showing correct historical details or exemplary projects of successful practice, occasionally combined with initiatives around the education of professionals and research.

3.1 *Edinburgh*

Common repairs are certainly an issue across the entire historical city centre but they have been better coordinated in the 18-19C areas. The New Town (1770-1890) was built to a quite consistent fabric specification in local sandstone, cladding a rubble wall in stone (often the high quality Craigleith free stone) or brick tiles, and is characterised by the restrained classicism and decorative elements of housing blocks and public buildings. The management of common repairs in tenements is an on-going technical and social problem due to the lack of experienced stone contractors and high costs to be shared among owners. Problems are often repetitive, manifesting in eroded ashlar elevations, decaying roof elements (cornices, balustrades, parapets, chimneys), distorted openings etc (SCOSS 2006).

Scotland is projected to experience increasing average temperatures throughout the year, an increase in average rainfall in winter linked with a decrease in summer and rising sea levels. (CCRA 2012). More water in the atmosphere and variable temperatures will accelerate decay that is already affecting the durability and stability of the stonework of 19th

century tenements, both the units and their connections (mortar, metal pins). This is manifested at the tying of internal brick or timber stud walls to the external stone walls, which may not have enough redundancies after a floor failure or settlement; shallow foundations; blocked gutters retaining water at the parapets and cornices; delaminating stone at windows or bay-window mullions (SCOSS 2006). Stone chimneys will further corrode as more of the acids from the ashes dissolve into their masonry ducts. Ultimately, inappropriate or fragmented repairs accelerate these phenomena, often with fatal consequences like the failure of the cornice above Ryan's Bar in the West End in June 2000.

The city's problems have been highlighted as early as in the 1960's, through some earlier failures of slums (like the "Penny Tenement" collapse in Beaumont Place, Holyrood Park in November 1959), the severe storms of 1966, the realisation of the scale of the problems (11,000 properties) and abandonment of the city centre, as also the advancement of some aggressive projects (like the demolition of George Square and the plans of an inner ring road). The architect Robert Matthew was instrumental in the establishment of the Edinburgh New Town Conservation Committee (ENTCC) in December 1970 with Desmond Hodges as the first director (EWHT 2012). A combination of pilot projects along the fringes of the New Town, Government and Council grants to home owners (repayable on the sale or transfer of the building), and encouragement of a sense of pride produced more than 1,200 repair projects. The success of the scheme led to the amalgamation with the Old Town Renewal Trust in 1999 forming the Edinburgh World Heritage Trust (EWHT).

The City Council (municipality) on the other hand has unique powers that stem from the 1991 "City of Edinburgh District Council Order Confirmation Act". Statutory notices according to the following articles of the Act can be served to private owners enforcing shared (or common) repairs for defects which may be a risk to public safety or health.

"24: when the structure of part of any building or anything affixed to any building ... has become insecure, worn out, or damaged or is in need of repair, the Council may, by notice, require the owner of such building to execute any works necessary for securing, restoring or repairing such structure, fixture"

"27.2: Every owner of every such part of such building shall be liable in equal shares to the Council for any expense incurred by the Council in executing any works."

The process of Statutory notices (see CEC 2014 for a summary) was managed by the Property Conservation dept. and went through a request for service, survey and estimate of costs, followed by Emergency or Open Notice to the owners; 28 days

were given for owners to make their arrangements; the Repairs Panel would then reach a decision and the project would be undertaken by contractors, occasionally recommended by the Council but always controlled by their surveyors. Repairs would be paid by a loan from the Council which would be repaid only when the property was sold.

In a way however, the statutory system of the Council to restore the city's minor heritage fell victim of its own success: there is a sheer volume of works with high expectation of Council intervention. The city's population is about 450,000 people in 215,000 living units, 55% of which are flats (118,250 units in around 14,800 buildings). The Scottish House Condition Survey of 2002 identified in Edinburgh 167,000 properties in state of disrepair, with 60,000 in urgent state. Repair cost for private sector was assessed to £758m in 2007, with patch (emergency) repairs at £158m.

In 2011, the Council had 3,000 outstanding Statutory Notices (for 35,000 individuals), out of which 1,800 Emergency Notices, to a value of £32M (CEC 2014). Moreover, in many cases the conditional surveys that followed the initial ones increased (greatly) the extent of the repairs, which has become a typical problem across the New Town. This became impossible to control, financially (repayment of loans) and in terms of quality, and the scheme collapsed in 2013, leading to a much leaner "Shared Repairs Service" which deals with only emergency cases.

The whole system however is legally still in place and can still provide a framework to organise shared repairs through the 1991 Edinburgh Act or the broader Tenements (Scotland) Act of 2004. EWHT on the other hand continues offering grants and positive advice to home-owners through exemplary projects and publications of its own good practice. In the financial year 2013-14, EWHT awarded £179,384 in grants, generating at the same time an investment of £971,563 (EWHT 2013).

Examples of extensive or complete façade replacement supported by ENTCC/ EWHT (Hyslop 2004) include 23 Fettes Row (rebuilt rusticated north façade in 1975), Hillside Crescent (mixture of chemical cleaning), 10-14 St. Vincent St. (entire replacement and soiling in 1995), 16-18 St. Vincent St. (1977). Partial façade replacement took place in 91-95 Hannover Street (ground floor, 1976), Gayfield Place (resulting in visual contrast against original soiled masonry, 1983), while repairs mainly on decorative elements were supported in 3-13 Carlton St (balustrades and discolouration, 1982), 2 Grosvenor Cr (chimney, balustrades, indents, 1985), 29 Ann Street (carved pilaster capital using recycled Craighleith stone, 1989).

An example of comprehensive and extensive stone repairs that combined the forces of the Council and EWHT is Montgomery & Windsor Street (Fig. 1), carried out by Hypostyle Architects (project ar-

chitect Jo Parry). The corner tenement is a significant witness of William Playfair's plans for his Eastern New Town Scheme, materialised mostly after his death. The value of the restoration project was about £800,000, which was shared to £30,000 among each owner, a substantial investment. The project carried out the rebuilding of both gables, extensive repairs and stone replacement to the elevations, and roof repairs, including the reinstatement of the octagonal chimney profiles and copes to Playfair's original design allowing the building's original aesthetic integrity to be restored.



Figure 1. Repairs in Montgomery & Windsor Street, Edinburgh

In 25 Learmonth Terrace, EWHT made a repayable grant of £290,381 under their Conservation Funding Programme to conserve the exterior (repairs to facing stonework, slate, balustrades, cast-iron gutters and downpipes), lasting around 8 months. Projects are not always of that scale and unfortunately it is unlikely that the current financial climate will allow such funding for some time.

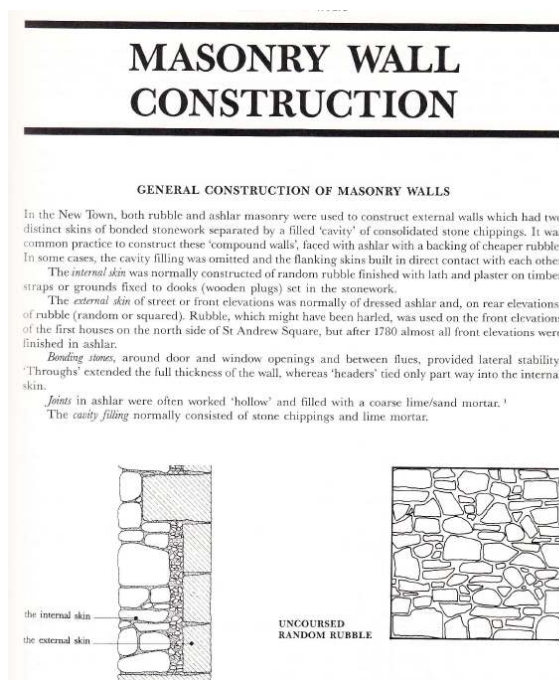


Figure 2. A page from "Care and Conservation"

Finally, a further contribution of ENTCC is the publication of the "Care and conservation of Georgian houses", a manual containing standard details and recommendations for repairs across the full range of elements that characterise the neoclassical housing building stock in Edinburgh (Fig. 2).

3.2 Glasgow

Common repairs are supported by the Glasgow City Heritage Trust (GCHT), an independent charity supported by Glasgow City Council and Historic Scotland. Similar to EWHT, they provide Building Repair Grants for repair, enhancement and conservation; help and advice to private owners; and Heritage Grants to support education and skills training. Properties are eligible for assistance if they are within designated conservation areas (Central, East Pollokshields, Shawlands or Walmer Crescent). £225,000 for grants has been awarded since GCHT was founded in 2007 (GCHT 2015).

Glasgow has a different background to Edinburgh as communal repairs are often financed by a Property Manager (Factor), which creates a very different social dynamic among flat owners in a tenement and facilitates planning. The Council on the other hand has no statutory powers, which makes common repairs a matter of private initiative when a problem arises or during conservation works. However, the Housing (Scotland) Act 2006 wants to ensure owners keep properties in good condition, therefore Glasgow City Council can issue a Maintenance Order forcing them to carry out repairs. The Council and GCHT in this context encourage owners to set up a maintenance plan for routine annual checks.

Similarly to ENTCC, Glasgow Conservation Trust West, a predecessor of GCHT, published the "West End Conservation Manual", for the use of professionals and owners. More limited in scope than the Edinburgh one, the manual includes sections on many technical aspects of the load-bearing fabric and the interior of buildings, as also conservation issues in parks and streetscapes.

3.3 Monumentenwacht, Flanders region

Monumentenwacht Vlaanderen is a "federation" of local chapters linked directly with the five Flemish provinces, set up in 1991. They are the intermediate public administration level between the Flemish Government and the municipalities, responding to the duty of care traditionally expected by the latter and helping building owners to act on their legal obligations enforced by the Flemish Government regarding listed buildings and their maintenance [conversation with Luc Verpoest, former chair of the agency]. Like EWHT and GCHT, the agency works directly with communities and individuals, empowering them and creating a strong social platform for heritage policy, further supporting them with publi-

cations and technical advice. Its agenda and actions are also driven by the PRECOMOS research network at RLICC in KU Leuven around the social and economic dimensions of preventive conservation.

The agency is based on voluntary membership (currently at 5,000) of public authorities, church communities and individual owners. They pay a subscription that gives them access and discount for regular condition surveys (exterior and interior), which provide detailed documentation and recommendations. Funding comes mainly from the local authorities involved but also the subscription and inspections fees, and Monumentenwacht does not get involved with the repairs themselves.

3.4 Italy

The country with the longest register of listed buildings, ancient monuments and sites of international importance in the world, has a wide variety of legislation and established pioneering concepts like landscape conservation. An essential first step is the legal definition of all types of interventions and Law 475 of 1978 distinguishes between ordinary maintenance (repair and renovation of finishings and services); extraordinary repairs (including the fabric); restoration (the previous levels plus a more systematic approach to the structure and architectural forms to include major elements); building restructuring; urban interventions.

A relief of 36% on income tax (IRPEF) applies for building restructuring up to 48,000 euros per property (Agenzia Entrate 2015). More recently, extra discounts were added, like 50% for the period June 2012 to December 2015 and 65% for seismic protection works (August 2013- December 2015), a scheme that showed its value in the recent earthquakes in the Abruzzo (L'Aquila) and Emilia Romagna regions. Further support exists for owners who plan energy efficiency renovations. In general, VAT (IVA) is at 10% for professional services for ordinary and extraordinary maintenance on private property.

The government (as established by the *Codice dei Beni Culturali e del Paesaggio* of the Ministry of Cultural Heritage) can also make direct contributions to projects selected by the Soprintendenze, with the key condition that the sites become accessible to the public (art. 38). Such contributions can be either on capital costs (art. 36), partially or in total, or the interests in authorised loans (art. 37).

3.4.1 Venice

Currently common repairs and conservation of minor heritage (*edilizia minore*) is operated by Insula spa, a company owned by a group headed by the City of Venice council. Its current form dates from 2009, when earlier companies were streamlined like Edilvenezia founded on the basis of special laws for Venice (Legge 1984, 1992) to coordinate the con-

servation of private heritage, control quality and manage finance. Significant funding became available from these laws and several buildings had their external fabric and common elements (roofs, foundations, drainage) repaired, clearly excluding internal interventions, with the condition on the owners to carry on with the maintenance of their property.

Interventions were mainly on public buildings and conversions, rather than maintenance. Projects include for example the refurbishment of 3 houses in Campiello del Piovan (Castello) at a cost of 247,000 euros (1994), or the creation of new apartments through the structural strengthening of the area of Fregnan (38 new units at a cost of 3M euros in 1998) or the conversion of the ex Ice Factory (23 flats at 1.7M euros in 1995), all in the Giudecca area, by Studio Pastor (Insula 2015).

This funding however is over, so several initiatives are currently promoted through Parliament, like the White Paper (*Disegno Legge Speciale*) 2487 that aim to ensure that local authorities in the Laguna have set up a special fund for preventive conservation and maintenance (Legge Speciale, 2015).

3.4.2 Rome

One of the most ancient cities in Europe with continuous occupation, the issues regarding historical private housing can be summarised by the fact that more than 70% of houses are more than 50 years old. A tragic accident highlighted the vulnerability of the housing fabric. In the morning of 16 December 1998, a block in Via di Vigna Jacobini collapsed without a notice, causing 27 fatalities.

In a reaction similar to Edinburgh and in line with broader initiatives by local authorities in the Lazio region to ensure the safety of their urban housing stock, the City of Rome attempted in 2004 to introduce a degree of control, effected through the "*Fascicolo di Fabbricato*" (Building Book or libretto casa): every building in the district would keep a record of all major works in the fabric or the services, so that the safety of the building and its inhabitants could be monitored (Architetti Roma 2015). This would include the original project, any building warrants, a condition survey at the time of creation of the Book, notes on any defects, their repair and evolution, services certificates etc.

However, the State Council (*Consiglio di Stato*) with its decision no. 1305 of 28 March 2008 essentially blocked the scheme as it was judged that the complexity and length of information required would make it unfeasible and legally untenable in a case of appeal. This was considered as a set back into a process that had the potential of a global control on safety and planning of ordinary and extraordinary maintenance. The decision did not cancel however the scheme, which is voluntary, but no statistics are available to assess its acceptance.

Regarding financial help, in addition to the nationally applied relief on income tax and VAT, the City of Rome offers exemption from Cosap (*Canone Occupazione Spazi e Aree Pubbliche*), the council tax on occupation of public spaces, to works on the refurbishment of elevations, plus further relief regarding publicity on the formwork.

Finally, an important long-term initiative in Rome and a few other cities (Palermo, Citta di Castello, Siena, Pretoro, Saluzzo) is the publication of the *Manuale del Recupero* (1989). Similar to “Care and Conservation”, it is a collection of carefully drawn examples of original construction details like roofs, often distinguishing between periods as also typologies. According to the authors, apart from providing direct technical advice as a result of scientific research, the focus was to enhance engagement with preservation among the public and private owners rather the administration, experienced professionals or academics, as happens usually. Historic centres can then be managed as groups of separate buildings with common transformations, rather than single units each with unique characteristics (Giovannetti 1998). Quality of research and illustrations are a key factor in such initiatives, and it was achieved through a long-term collaboration with academic units.

3.5 France

Various levels of control and support exist in France, combining some of the tools seen in Italy and Edinburgh, usually financed and audited by ANAH (*Agence Nationale de l’Habitat*), the national housing agency. Modest repairs and refurbishment of properties in an unhealthy or indecent state can be financed as part of a programme of urban renewal (OPAH-RU). Major issues of health and safety for the inhabitants and the public (*résorption de l’habitat insalubre - RHI*) are addressed by either a sort of statutory notices (*opérations de restauration immobilière - ORI*) or public acquisition and refurbishment of dangerous buildings, as part of the THIRORI scheme (*lutte contre l’habitat indigne* – decayed housing), both established in 1994 when the “Malraux” tax scheme was re-evaluated (ANAH 2010). This is a reduction of the tax reliefs established by the important architectural conservation legislation by André Malraux in 1962. Currently these mount to 30% for a total cost up to 100K euros, reducing to 22% for projects in Conservation Areas (*Zone de Protection du Patrimoine Architectural Urbain et Paysage (ZPPAUP)*).

ORI type of projects include refurbishment of chimneys, together with accessibility adaptation of buildings by addressing barriers like walls, partitions, doors frames, pavements, projections and thresholds, floor coverings, lighting, ramps etc. For acquisitions of buildings with major problems for the public under THIRORI, ANAH can finance up

to 50% of the works, including fees, relocation expenses, land acquisition, demolition, refurbishment and contractors. Beneficiaries include wider community groups and public building societies, who will be assessed on the new use they will provide, the need for public finance as also whether their project fits any conservation schemes of the area or the local policies against decayed housing.

3.6 Madrid

In Spain, the Plan for Housing Rehabilitation (*Plan Estatal de Vivienda y Rehabilitación*) is focused more on the quality of life of the inhabitants rather than the preservation of an individual building, while conservation is carried out at an urban scale. The RENOVE scheme for example finances habitability, accessibility and removal of barriers, services upgrade or energy efficiency.

Zooming into a specific area, the *Comunidad de Madrid* (region) offers through their *Plan de Rehabilitación 2009 – 2012* various types of support for the rehabilitation of houses that are not part of a Conservation Area (*ámbitos de rehabilitación integrada*) – the latter having different funding streams. This is in the form of grants or loans for individual apartments or the condominium and cover 20 -25% of the budget. Such projects address the embellishment of the exterior of a residential building (25% for up to 6,000 euros), improvement of the function of elements and communal areas regarding safety, accessibility, insertion of lifts, healthy living, reduction of CO₂ emissions, but also buildings of a special typology (older than 50 years) financed up to 10,000 euros.

3.7 Hermoupolis

The city of Hermoupolis is the capital of the Cyclades islands in Greece and one of the new cities created after the independence of 1830. The city still maintains its unique neoclassical character, both in public and private buildings, possibly to a greater extent compared to its contemporaries (Nafplio, Athens, Patras, Piraeus, Aigio, Sparta, Tripolis, Pyrgos). Built at different stages between 1837 and 1920’s and bearing influences from already existing urban cultures of resident Venetian and Genoate communities, the fabric is characterised by rubble loadbearing walls faced in course rubble, ashlar, rustications or even marble cladding, occasionally in multi-storey forms.

There are no specific measures or funding schemes for common repairs across the whole of Greece but in the last years the need for management has emerged. This is still on its early stages and a few databases are being set up like the Estia national database of listed buildings (Estia 2015) or the survey of buildings at risk in Athens (Monumenta 2015). The former database is the legal register and is used for planning applications, listed building con-

sents and funding that is occasionally available for major refurbishment or conservation.

A more dynamic environment has been set up for Hermoupolis. Historical buildings are recorded in the database HERMES with the aim to evaluate their vulnerability as part of a decision-making model that ranks accordingly the need of intervention and allows for management of repairs. The database collects essential but basic pathology data (often just a qualitative check whether the building is in a bad state and has been repaired) and short information on the architecture character, significance and location data are included (similar to Estia).

Essentially a multi-variable model (Chatzigrigoriou 2013), the system is based on two interconnected pillars: the Database System (DBMS “Hermes” – which addresses the reliability of the data) and the Geographical Information System (GIS “Hermes”). The combination of such data on a single place has the potential of constantly updating a building’s conservation status assessing the need for intervention against the risk of failure, but many more detailed fields are required that map the key observations from more extensive condition surveys.

4 DISCUSSION

The review of some European case studies is certainly not complete as more approaches have to be explored in other cities and countries where minor, housing heritage is in a good conservation condition (for example Germany, Austria, Poland). It was also shown that no area has a comprehensive approach as Edinburgh’s, but partial aspects of that are usually practised by local authorities in these areas.

Most models seem to offer a valuable service but it does not seem they can address a volume of common repairs similar to Edinburgh, either through management organisation or available funding. It is also true however that the Edinburgh statutory framework by the City Council collapsed under its own weight and became unworkable without further resourcing and tight management. The critique by the Edinburgh Conveyancers’ Forum (ECF 2013), the solicitors involved in buying and selling residential property in the city, confirms that scale and disengagement of the owners are the main problems, which are likely to increase in the future, so essential repairs should continue to be compulsory and enforced by the Council. Many other cities or countries appear reluctant to apply such extensive control, so it is important that good practice is shared among them so that they can explore feasible approaches, which is the scope this paper wants to initiate.

When public money is available, a lot can be done as the work of EWHT/ ENTCC and Insula spc showed, otherwise the usual practice is tax relief. To provide proper control and positive support, city au-

thorities have to be properly equipped but Edinburgh showed how difficult this is, so successful and sustainable models as the above are semi-private agencies with significant independence in their structure and decision-making.

In technical terms, economies of scale can be explored by developing solutions to be applied across many properties during the same project. They should be an opportunity to detect and manage systematically a range of water-related problems affecting integrity of stone blocks or their connections, while their strengthening can be rationalised through performance-based design treating them as micro-structures. Common repairs across many blocks could be then awarded as a single contract, which will permit dissemination of existing good practice or development of new solutions and ultimately contribute to sustainable business for stone contractors who want to specialise in traditional skills.

A step further to raise awareness among owners and local authorities could be to assess the current need for common repairs through an independent report in the style of the ICE Scotland State of the Nation Infrastructure 2015 report. The production of a strategic document on the economic performance of traditional (pre-1919) housing in the prospect of climate change and continuous lack of initiative by owners can lead local authorities to set priorities and pilot projects, pump-priming the repair industry and highlighting the benefits of positive action.

A further initiative in Scotland which may be in the right direction of engaging with and encouraging owners is the Traditional Buildings Health Check Scheme in Stirling (TBHC 2015). Similarly to Monumentenwacht, it is a proactive, membership scheme to assist in the maintenance of traditional properties within the Stirling City boundary. Membership offers access to maintenance and repair advice from the Traditional Buildings Team and an impartial building inspection service.

5 CONCLUSION

A variety of practices exist across Europe to encourage and support owners in the maintenance and repair of historical (pre-1919) housing. They rank from the most comprehensive (Edinburgh) to tax reliefs and voluntary monitoring schemes, and often success depends on the availability of public funding. Raising awareness and understanding the extent and facets of the problem must be the priorities for any argument for further policies or funding to be effective. The European experience shows also the benefits of stronger initiatives by the local authorities (Edinburgh, Venice) as also the potential of sharing good practice and information (Italy, Scotland, Greece). All schemes depend on the active involvement of the owners, which has to be nurtured,

otherwise it is overwhelming for the public administration to fully “orchestrate” them. In any case, governments have to face common repairs as a problem of equal importance to monuments conservation and get the message through with the right policies and funding.

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