

```

classDiagram
    class ServiceLayer {
        class TransportsService {
            +addTransport(json: string): JSON
            +updateTransport(json: string): JSON
            +removeTransport(json: string): JSON
            +getTransport(json: string): JSON
            +getAllTransports(): JSON
        }
        class ItemListService {
            +addItemList(json: string): JSON
            +updateItem(json: string): JSON
            +removeItem(json: string): JSON
            +getItemList(json: string): JSON
            +getAllItemLists(json: string): JSON
        }
        class ResourceManagementService {
            +addSite(json: string): JSON
            +updateSite(json: string): JSON
            +removeSite(json: string): JSON
            +getSite(json: string): JSON
            +getAllSites(): JSON
            +addDriver(json: string): JSON
            +updateDriver(json: string): JSON
            +removeDriver(json: string): JSON
            +getDriver(json: string): JSON
            +getAllDrivers(): JSON
            +addTruck(json: string): JSON
            +updateTruck(json: string): JSON
            +removeTruck(json: string): JSON
            +getTruck(json: string): JSON
            +getAllTrucks(): JSON
        }
    }

    class BusinessLayer {
        class TransportsController {
            -Trasports: Map<Transport>
            +addTransport(new: Transport): void
            +updateTransport(id: int, new: transport): void
            +removeTransport(id: int): void
            +getTransport(id: int): Transport
            +getAllTransports(): LinkedList<Transport>
        }
        class ItemListsController {
            -itemLists: Map<List>
            +addItemList(list: ItemList): void
            +updateItem(id: int, new: ItemList): void
            +removeItem(id: int): void
            +getItemList(id: int): ItemList
            +getAllItemLists(): LinkedList<ItemList>
        }
        class DriversController {
            +drivers: Map<Driver>
            +createDriver(new: Driver): void
            +updateDriver(id: int, new: Driver): void
            +removeDriver(id: int): void
            +getDriver(id: int): Driver
            +getAllDrivers(): LinkedList<Driver>
        }
        class TrucksController {
            +trucks: Map<Truck>
            +createTruck(new: Truck): void
            +updateTruck(id: int, new: Truck): void
            +removeTruck(id: int): void
            +getTruck(id: int): Truck
            +getAllTruck(): LinkList<Truck>
        }
        class Transport {
            -id: int {unique}
            -source: site
            -destinations: list<site>
            -itemsLists: map<site,Itemlist>
            -truckId: int
            -driverId: int
            -scheduledTime: LocalDateTime
            -leavingTime: LocalTime
            -weight: int
        }
        class Driver {
            -id: int {unique}
            -name: string
            -licenseType: enum
        }
        class ItemList {
            -id: int {unique}
            +load: map<string,int>
            +unload: map<string,int>
        }
        class Site {
            -TransportZone: string
            -Address: string {unique}
            -phoneNumber: string
            -contactName: string
            +siteType: enum
        }
        class Truck {
            +id: int {unique}
            +model: string
            +baseWeight: int
            +maxWeight: int
            +coolingCapacity: enum
        }
        class SitesController {
            -Sites: Map<Site>
            +addSite(new: Site): void
            +updateSite(address: string, new: Site): void
            +removeSite(address: string): void
            +getSite(Address: string): Site
            +getAllSites(): LinkedList<Site>
        }
    }

    ServiceLayer --> BusinessLayer : +uses
    TransportsController --> TransportsService : +uses
    ItemListsController --> ItemListService : +uses
    DriversController --> Driver : +uses
    TrucksController --> Transport : +uses
    Transport --> Driver : +holds id, 1 to 0..*
    Transport --> ItemList : 1 to 1..*
    Transport --> Site : 0..*
    Transport --> Truck : 0..*
    SitesController --> Site : +uses
    
```

